MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

To: R.J. Courchaine, Water Quality Division

From: Richard Christensen, Chairman,
Problem Review Committee

Date: March 15, 1978

Attached are the committee's comments from the review of the files of General Motors-Bay City, Master Cast-Howell, TRW Inc.-Portland Works, Hoover Ball and Bearing Company-Fowlerville, Active Industries-Elkton and Industrial Phosphating-St. Johns.

RC:mm

cc: W. Turney
Problem Review
Committee

INTEROFFICE COMMUNICATION

March 7, 1978

TO: Problem Evaluation Committee

FROM: Ronald Willson, Biology Section

RE: TRW Incorporated, Portland Works

TRW Incorporated, Portland Works produces heavy duty steering linkages from steel stock for use in heavy road equipment. Plant processes consist of forging, machining, heat treating and assembly. The heat treating is a nitrating operation involving gases and is a dry process except for non-contact cooling water.

Industrial wastes consist of cooling water, soluble cutting oils, parts washer water, water curtain overflow and rinses from the bonderizing line. Industrial wastes are directed from storage tanks to a clarifier which in turn discharges to the first of a series of three settling ponds which finally discharges to a flood plain marsh, approximately 450 feet from the Grand River. Sanitary wastes, after initial treatment in a septic tank, are also discharged to the first lagoon of the series.

The Company has an approved PIPP (April 12, 1974), however, no material storage facilities were identified or described. The most recent data on TRW is a March, 1973, wastewater survey. The most significant components of the final effluent to the marsh were coliforms ($\leq$ 21,000,000/100 ml), fecal coliforms ($\leq$ 11,000/100 ml), detergents ($\leq$ 1.5 mg/l) and zinc ($\leq$ 0.5 mg/l). Oils have been a problem in the past, but the 1973 study did not indicate a continuing problem. PCB's were present in the final effluent at 0.51 ug/l.

The flood plain marsh could provide considerable additional treatment and polishing of the effluent prior to its entering the Grand River or the groundwaters. However, channeling within the marsh could negate any further improvements in effluent quality and result in a direct discharge to the river. Present effluent limitations are provided for in a WRC Stipulation dated December 14, 1970. Depending on conditions existing in the flood plain, this facility should be brought under either a State Groundwater or NPDES Permit.

TRW reported no usage of PCB containing materials other than 279 gallons contained in one transformer. However, the presence of PCB's in their effluent in 1973 indicated an uncontained source at that time. If PCB's are still present in the effluent, corrective actions under Act 60 would have to be made.

RECOMMENDATIONS

1. This facility should be brought under either a State Groundwater or NPDES Permit to replace the existing WRC Stipulation.

2. A biological investigation should be performed on the marsh to assess conditions, determine the relationship of the effluent to the Grand River, and identify the type of permit needed.

3. A wastewater survey should be performed at TRW to provide updated information on waste characteristics which will facilitiate permit development. This study should also assess any necessary PIPP modifications.

4. Both the biological investigation and wastewater survey should address sanitary wastes and determine whether existing treatment and discharge practices are adequate or appropriate.

5. Samples of the final effluent, sludges from the first pond and sediments from the marsh area should be collected for PCB analysis.

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